

Application No. 10/064,607
Docket No. 17MY-7089
Amendment dated July 29, 2003
Reply to Office Action of March 31, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A castable weldable nickel-base alloy consisting essentially of, by weight, 10% to 25% cobalt, 20% to 28% chromium, 1% to 3% tungsten, 0.5% to 1.5% aluminum, 1.5% to 2.8% titanium, 0.8% to 1.45% columbium, tantalum in an amount less than 0.4% columbium and Cb + 0.508Ta is up to 1.15% to 1.45%, 0.001% to 0.025% boron, up to 0.4% zirconium, 0.02% to 0.15% carbon, with the balance essentially nickel and incidental impurities.


Claim 2 (original): The alloy according to claim 1, wherein the columbium content is at least 1.25%.

Claim 3 (currently amended): The alloy according to claim 1, wherein the tantalum content is less than 0.1% to 0.5%.

Claim 4 (currently amended): The alloy according to claim 1, wherein the alloy is essentially free of tantalum content is about 0.0%.

Application No. 10/064,607
Docket No. 17MY-7089
Amendment dated July 29, 2003
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Claim 5 (original): The alloy according to claim 1, wherein the cobalt content is 18.5% to 19.5%, the chromium content is 22.2% to 22.8%, the tungsten content is 1.8% to 2.2%, the aluminum content is 1.1% to 1.3%, the titanium content is 2.2% to 2.4%, the boron content is 0.002% to 0.015%, the zirconium content is 0.005% to 0.4%, and the carbon content is 0.08% to 0.12%.



Claim 6 (original): The alloy according to claim 1, wherein the alloy contains at least 18 volume percent of a gamma-prime precipitate phase.

Claim 7 (original): The alloy according to claim 1, wherein the alloy is in the form of a cast nozzle of a gas turbine engine.

Claim 8 (original): The alloy according to claim 7, wherein the nozzle is installed in a second or third turbine stage of the gas turbine engine.


Claim 9 (currently amended): A castable weldable nickel-base alloy consisting essentially of, by weight, 18.5% to 19.5% cobalt, 22.2% to 22.8% chromium, 1.8% to 2.2% tungsten, 1.1% to 1.3% aluminum, 2.2% to 2.4% titanium, 0.9% to 1.45% columbium, less than 0.4% ~~0.5%~~ tantalum and $Cb + 0.508Ta$ is up to 1.15% to 1.45%, 0.002% to 0.015% boron, 0.005% to 0.4% zirconium, 0.08% to 0.12% carbon, 

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Docket No. 17MY-7089
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with the balance essentially nickel and incidental impurities.

Claim 10 (currently amended): The alloy according to claim 9, wherein the tantalum content is less than 0.1% ~~about 0.0%~~.

Claim 11 (currently amended): The alloy according to claim 9, wherein the alloy is essentially free of tantalum.



Claim 12 (original): The alloy according to claim 9, wherein the columbium content is about 1.3%.


Claim 13 (original): The alloy according to claim 9, wherein the alloy contains about 25 to about 38 volume percent of a gamma-prime precipitate phase.

Claim 14 (original): The alloy according to claim 9, wherein the alloy is in the form of a cast nozzle of a gas turbine engine.

Claim 15 (original): The alloy according to claim 14, wherein the nozzle is installed in a second or third turbine stage of the gas turbine engine.

Application No. 10/064,607
Docket No. 17MY-7089
Amendment dated July 29, 2003
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Claim 16 (currently amended): A castable weldable nickel-base alloy consisting ~~essentially~~ of, by weight, about 19% cobalt, about 22.5% chromium, about 2% tungsten, about 1.2% aluminum, about 2.3% titanium, about 1.3% columbium, ~~about 0.0% tantalum~~, about 0.01% boron, about 0.01% zirconium, about 0.1% carbon, with the balance essentially nickel and incidental impurities.



Claim 17 (original): The alloy according to claim 16, wherein the alloy is free of tantalum.

Claim 18 (original): The alloy according to claim 16, wherein the alloy contains about 33 to about 38 volume percent of a gamma-prime precipitate phase.

Claim 19 (original): The alloy according to claim 16, wherein the alloy is in the form of a cast nozzle of a gas turbine engine.

Claim 20 (original): The alloy according to claim 19, wherein the nozzle is installed in a second or third turbine stage of the gas turbine engine.
